

REMARKS

Claims 12, 17, 18, 20, 22, 24, 26, 28 and 30 are pending in this application. By this Amendment, claim 12 is amended. No new matter is added. Reconsideration of the application based on the above amendments and the following remarks is respectfully requested.

The Office Action rejects claims 12, 17, 18, 20, 22, 24, 26, 28 and 30 under 35 U.S.C. §103(a) over U.S. Patent Publication No. 2003/0143370 to Noguchi in view of U.S. Patent No. 6,440,185 to Nagata and U.S. Patent No. 3,773,573 to Slykhause, as allegedly evidenced by the "printouts" regarding the Matsumoto Microsphere F-series product data. This rejection is respectfully traversed.

As argued in the February 1, 2010 Request for Reconsideration and the February 2, 2010 Personal Interview with the Examiners, the references do not disclose the features recited in claim 12. To expedite allowance, claim 12 is amended to recite an additional feature. These added features, together with the features that were previously recited and argued, are critical and novel over the references as shown in the Declaration and as discussed below.

In particular, claim 12 recites, among other features, "storing a foamed resin for four weeks; ... as the foamed resin, there is used a material in which the weight of a gas included in the foamed resin stored at 40°C for 4 weeks is 8% or more of the weight of the foamed resin and in which a weight decrease ratio of the gas included in the foamed resin stored at 40°C for 4 weeks is 30% or less with respect to the weight of the gas before stored, and a resin of an outer shell of the foamed resin is constituted of a copolymer containing 60 wt% or more of acrylonitrile and 40 wt% or less of methyl methacrylate."

When the foamed resin is stored for four weeks, the range recited in "a resin of an outer shell of the foamed resin is constituted of a copolymer containing 60 wt% or more of

acrylonitrile and 40 wt% or less of methyl methacrylate" is critical. Specifically, the table on page 16 of Applicants' specification discloses, when the resin is stored at four weeks, four examples where the foamed resin amount of acrylonitrile (AN) is at least 60% and two counter examples where the AN range is 50%. In the examples, the methyl methacrylate (MMA) range is at most 40%. The examples show gas weight decrease ratios of less than 30%, as recited in claim 1. In contrast, in the counter examples, the MMA range is 50%. The counterexamples have gas weight decrease ratios of 64%, which cannot corresponds to the recited "less than 30%" amount.

In addition, Yasushi Noguchi, one of the inventors of this application, has prepared a Declaration providing test results (Examples 1-8 and Comparative Examples 1-5) in addition to those of shown on page 16 of Applicants' specification. As shown in Examples 1-8, when (1) "storing a foamed resin for 4 weeks," (2) "the weight of a gas included in the foamed resin stored at 40°C for 4 weeks is 8% or more of the weight of the foamed resin, (3) in which a weight decrease ratio of the gas included in the foamed resin stored at 40°C for 4 weeks is 30% or less with respect to the weight of the gas before stored, and (4) a resin of an outer shell of the foamed resin is constituted of a copolymer containing 60 wt% or more of acrylonitrile and 40 wt% or less of methyl methacrylate," desirable porosity results of at least 65% are achieved. These requirements are shown in Table 2 of the Declaration. Table 2 also shows "80 wt% or more of the gas included in the foamed resin is a C5 component having 5 carbon atoms," as recited in claim 20.

The Comparative Examples 1-5 do not meet these conditions. Comparative Examples 1-4 does not have an AN/MMA ration in the above range. Comparative Example 5 is the only Comparative Example with the AN/MMA ratio in the above range. However, as shown in Item 6 in the Declaration, Example 5 is not acceptable because an included gas amount before storage is substandard, i.e., not "8% or more."

As shown above, the recited ranges are critical and yields unexpected results, which rebuts the Office Action's prima facie case of obviousness.

For at least the above reasons, the applied references do not disclose or render obvious the subject matter recited in claims 12, and claims 17, 18, 20, 22, 24, 26, 28 and 30 depending therefrom. Also, one of ordinary skill would not have had any reason to combine the teachings of the references, as asserted in the Office Action.

Accordingly, withdrawal of the rejection of claims 12, 17, 18, 20, 22, 24, 26, 28 and 30 under 35 U.S.C. §103(a) is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 12, 17, 18, 20, 22, 24, 26, 28 and 30 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:

Declaration under 37 C.F.R. §1.132

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